RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/0061

Source:

Date Processed by STIC:

ENTERED



IFW16

RAW SEQUENCE LISTING DATE: 04/15/2005 PATENT APPLICATION: US/10/006,591A TIME: 12:15:44

Input Set : A:\1087-3.txt

Output Set: N:\CRF4\04152005\J006591A.raw

```
3 <110> APPLICANT: Bowdish, Katherine S.
              Frederickson, Shana
      5
              Lin, Ying-Chi
      6
              Renshaw, Mark
      7
              Wild, Martha
              McWhirter, John
     10 <120> TITLE OF INVENTION: ENGINEERED PLASMIDS AND THEIR USE FOR IN SITU PRODUCTION OF
GENES
     12 <130> FILE REFERENCE: 1087-3
     14 <140> CURRENT APPLICATION NUMBER: 10/006,591A
     15 <141> CURRENT FILING DATE: 2001-12-05
     17 <150> PRIOR APPLICATION NUMBER: 60/251,440
     18 <151> PRIOR FILING DATE: 2000-12-05
     20 <160> NUMBER OF SEQ ID NOS: 13
     22 <170> SOFTWARE: PatentIn version 3.2
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 6122
     26 <212> TYPE: DNA
     27 <213> ORGANISM: Artificial Sequence
     29 <220> FEATURE:
     30 <223> OTHER INFORMATION: Description of Artificial Sequence: vector
     32 <400> SEOUENCE: 1
                                                                               60
     33 gggaaattgt aagcgttaat attttgttaa aattcgcgtt aaatttttgt taaatcagct
                                                                              120
     35 catttttaa ccaataggcc gaaatcggca aaatccctta taaatcaaaa gaatagaccg
     37 agatagggtt gagtgttgtt ccagtttgga acaagagtcc actattaaag aacgtggact
                                                                              180
     39 ccaacgtcaa agggcgaaaa accgtctatc agggcgatgg cccactacgt gaaccatcac
                                                                              240
     41 cctaatcaag ttttttgggg tcgaggtgcc gtaaagcact aaatcggaac cctaaaggga
                                                                              300
     43 geceegatt tagagettga eggggaaage eggegaaegt ggegagaaag gaagggaaga
                                                                              360
     45 aagcgaaagg agcgggcgct agggcgctgg caagtgtagc ggtcacgctg cgcgtaacca
                                                                              480
     47 ccacaccege egegettaat gegeegetac agggegegte aggtggeact ttteggggaa
                                                                              540
     49 atgtgcgcgg aacccctatt tgtttatttt tctaaataca ttcaaatatg tatccgctca
     51 tgagacaata accctgataa atgcttcaat aatattgaaa aaggaagagt atgagtattc
                                                                              600
     53 aacattteeg tgtegeeett atteeetttt ttgeggeatt ttgeetteet gtttttgete
                                                                              660
                                                                              720
     55 acccagaaac gctggtgaaa gtaaaagatg ctgaagatca gttgggtgca cgagtgggtt
     57 acategaact ggateteaac ageggtaaga teettgagag tittegeece gaagaacgtt
                                                                              780
                                                                              840
     59 ttccaatgat gagcactttt cgaccgaata aatacctgtg acggaagatc acttcgcaga
                                                                              900
     61 ataaataaat cctqqtqtcc ctqttqatac cgggaagccc tqqqccaact tttqqcgaaa
                                                                              960
     63 atgagacgtt gatcggcacg taagaggttc caactttcac cataatgaaa taagatcact
     65 accgggcgta ttttttgagt tgtcgagatt ttcaggagct aaggaagcta aaatggagaa
                                                                             1020
     67 aaaaatcact ggatatacca ccgttgatat atcccaatgg catcgtaaag aacattttga
                                                                             1080
     69 ggcatttcag tcagttgctc aatgtaccta taaccagacc gttcagctgg atattacggc
                                                                             1140
     71 ctttttaaag accgtaaaga aaaataagca caagttttat ccggccttta ttcacattct
                                                                             1200
     73 tgcccgcctg atgaatgctc atccggaatt acgtatggca atgaaagacg gtgagctggt
                                                                             1260
     75 gatatgggat agtgttcacc cttgttacac cgttttccat gagcaaactg aaacgttttc
                                                                             1320
```

RAW SEQUENCE LISTING DATE: 04/15/2005
PATENT APPLICATION: US/10/006,591A TIME: 12:15:44

Input Set : A:\1087-3.txt

Output Set: N:\CRF4\04152005\J006591A.raw

77 ata	actataa	actonataco	acgacgattt	ccaccaattt	ctacacatat	attoqcaaqa	1380
			acctggccta				1440
			gggtgagttt				1500
			ttttcaccat				1560
			aggttcatca				1620
			agtactgcga				1680
			aaacgcctgg				1740
			aagcaaattc				1800
			ttgctggttt				1860
		_			_		1920
			ctgaggccag				1980
			tttctgatca ttaacgtgag				2040
	_						2100
						ctgcttgcaa	2160
						accaactctt	2220
						tctagtgtag	2280
						cgctctgcta	2340
						gttggactca	2400
						gtgcacacag	2460
						gctatgagaa	2520
						g cagggtcgga	2520
						tagtcctgtc	2640
						ggggcggagc	
						ctggcctttt	2700
						taccgccttt	2760
						agtgagcgag	2820
						gattcattaa	2880
						cgcaattaat	2940
						ggctcgtatg	3000
						tgaaaaagac	3060
						g cggccgagct	3120
						a agtgcctctg	3180
						gccggagagc	3240
						atggtcagaa	3300
						g tgtgacgctc	3360
						ttgcatcgag	3420
						a gatgtggatt	3480
						accgctggat	3540
						cgaacgctgg	3600
						agatacactt	3660
						a aaccttattt	3720
						c cgttgatgtt	3780
159 ga	agtggcga	gcgatacacc	gcatccggcg	g cggattggco	tgaactgcca	a gctggcgcag	3840
161 gt	agcagago	gggtaaactg	gctcggatta	gggccgcaag	g aaaactatco	cgaccgcctt	3900
						tggctgcacc	3960
						g cctctgttgt	4020
167 gt	gcctgctg	, aataacttct	atcccagaga	ggccaaagta	a cagtggaagg	g tggataacgc	4080
						g acagcaccta	4140
						a aagtatatgc	4200
						a acaggggaga	4260

RAW SEQUENCE LISTING DATE: 04/15/2005
PATENT APPLICATION: US/10/006,591A TIME: 12:15:44

Input Set : A:\1087-3.txt

Output Set: N:\CRF4\04152005\J006591A.raw

```
175 gtgttagttc tagataatta attaggagga atttaaaaatg aaatacctat tgcctacggc
                                                                        4380
177 agecgetgga ttgttattac tegetgeeca accagecatg gecetegage tgatgageca
179 tggaagetgt gtegeetgea ceaggeteee aeggetegtg gtgeggtgeg ettetggtgt
                                                                        4440
181 tegetgeeta cageegacae gtegagette gtgeecetag agttgegegt cacageagee
                                                                        4500
183 tecqqeqete eqeqatatea eegtgteate cacateaatg aagtagtget eetagaegee
                                                                        4560
185 cccgtggggc tggtggcgcg gttggctgac gagagcggcc acgtagtgtt gcgctggctc
                                                                        4620
187 ccgccgcctg agacacccat gacgtctcac atccgctacg aggtggacgt ctcggccggc
                                                                        4680
189 aacqqcqcag ggaqcqtaca gaggqtggag atcctggagg gccgcaccga gtgtgtgctg
                                                                        4740
191 ageaacetge ggggeeggae gegetaeace ttegeegtee gegegegtat ggetgageeg
                                                                        4800
193 agetteggeg gettetggag egeetggteg gageetgtgt egetgetgae geetagegae
195 ctggaccccc tcatcctgac gctctccctc atcctcgtgg tcatcctggt gctgctgacc
                                                                        4920
197 gtgctcgcgc tgctctccca ccgccgggct ctgaagcaga agatctggcc tggcatcccg
                                                                        4980
199 aqcccaqaqa qcqaqtttga aggcctcttc accacccaca agggtaactt ccagctgtgg
                                                                        5040
201 ctgtaccaga atgatggctg cctgtggtgg agcccctgca cccccttcac ggaggaccca
203 cctgcttccc tggaagtcct ctcagagcgc tgctggggga cgatgcaggc agtggagccg
                                                                        5160
                                                                        5220
205 gggacagatg atgagggcc atcggtcttc cccttggcac cctcctccaa gagcacctct
207 gggggcacag cggccctggg ctgcctggtc aaggactact tccccgaacc ggtgacggtg
                                                                        5280
209 tegtggaact caggegeett gaccagegge gtgeacacet teeeggetgt cetacagtee
                                                                        5340
211 tcaggactct actccctcag cagcgtggtg accgtgccct ccagcagctt gggcacccag
                                                                        5400
213 acctacatet qeaacqtqaa teacaaqeee aqeaacacea aqqtqqacaa gaaagttgag
                                                                        5460
215 cccaaatctt gtgacaaaac tagtggccag gccggccagc accatcacca tcaccatggc
217 gcatacccgt acgacgttcc ggactacgct tcttaggagg gtggtggctc tgagggtggc
                                                                        5580
219 ggttetgagg gtggeggete tgagggagge ggtteeggtg gtggetetgg tteeggtgat
                                                                        5640
221 tttgattatg aaaagatggc aaacgctaat aagggggcta tgaccgaaaa tgccgatgaa
                                                                        5700
223 aacgcgctac agtctgacgc taaaggcaaa cttgattctg tcgctactga ttacggtgct
                                                                        5760
225 gctatcgatg gtttcattgg tgacgtttcc ggccttgcta atggtaatgg tgctactggt
                                                                        5820
227 gattttgctg gctctaattc ccaaatggct caagtcggtg acggtgataa ttcaccttta
                                                                        5880
229 atgaataatt teegteaata tttacettee eteceteaat eggttgaatg tegeeetttt
                                                                        5940
231 qtctttaqcq ctqqtaaacc atatqaattt tctattqatt qtqacaaaat aaacttattc
                                                                        6000
                                                                        6060
233 cqtqqtqtct ttqcqtttct tttatatqtt qccaccttta tqtatqtatt ttctacqttt
235 gctaacatac tgcqtaataa ggaqtcttaa gctagctaat taatttaagc ggccgcagat
                                                                        6120
                                                                        6122
237 ct
240 <210> SEQ ID NO: 2
241 <211> LENGTH: 6
242 <212> TYPE: DNA
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Description of Artificial Sequence: vector
248 <400> SEOUENCE: 2
                                                                           6
249 actagt
252 <210> SEQ ID NO: 3
253 <211> LENGTH: 16
254 <212> TYPE: DNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Description of Artificial Sequence: collar sequence
261 <220> FEATURE:
262 <221> NAME/KEY: misc feature
263 <222> LOCATION: (16)..(16)
```

DATE: 04/15/2005

TIME: 12:15:44

Input Set : A:\1087-3.txt Output Set: N:\CRF4\04152005\J006591A.raw 264 <223> OTHER INFORMATION: n is c or t 266 <400> SEQUENCE: 3 16 W--> 267 gggtcatctg gatgtn 270 <210> SEQ ID NO: 4 271 <211> LENGTH: 50 272 <212> TYPE: DNA 273 <213> ORGANISM: Artificial Sequence 275 <220> FEATURE: 276 <223> OTHER INFORMATION: Description of Artificial Sequence: primer 278 <400> SEQUENCE: 4 279 attaacactc teceetgttg aagetetttg tgaegggega acteaggeec 50 282 <210> SEO ID NO: 5 283 <211> LENGTH: 68 284 <212> TYPE: DNA 285 <213> ORGANISM: Artificial Sequence 287 <220> FEATURE: 288 <223> OTHER INFORMATION: Description of Artificial Sequence: duplexing oligo 291 <220> FEATURE: 292 <221> NAME/KEY: misc feature 293 <222> LOCATION: (2)..(2) 294 <223> OTHER INFORMATION: n is a or g 296 <400> SEQUENCE: 5 W--> 297 cnacatccag atgacccggg cctgagttcg cccgtcacaa agagcttcaa caggggagag 60 299 tqttaatt 68 302 <210> SEQ ID NO: 6 303 <211> LENGTH: 76 304 <212> TYPE: DNA 305 <213> ORGANISM: Artificial Sequence 307 <220> FEATURE: 308 <223> OTHER INFORMATION: Description of Artificial Sequence: duplexing oligo 311 <220> FEATURE: 312 <221> NAME/KEY: misc_feature 313 <222> LOCATION: (71)..(71) 314 <223> OTHER INFORMATION: n is c or t 316 <400> SEQUENCE: 6 317 ctagaattaa cactctcccc tgttgaagct ctttgtgacg ggcgaactca ggcccgggtc 60 76 W--> 319 atctggatgt ngagct 322 <210> SEQ ID NO: 7 323 <211> LENGTH: 20 324 <212> TYPE: DNA 325 <213> ORGANISM: Artificial Sequence 327 <220> FEATURE: 328 <223> OTHER INFORMATION: Description of Artificial Sequence: collar sequence 331 <220> FEATURE: 332 <221> NAME/KEY: misc feature 333 <222> LOCATION: (15)..(15) 334 <223> OTHER INFORMATION: n is c or a 336 <400> SEQUENCE: 7 20 W--> 337 gactgcacca gctgnacctg

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/006,591A

DATE: 04/15/2005

TIME: 12:15:44

Input Set : A:\1087-3.txt Output Set: N:\CRF4\04152005\J006591A.raw 340 <210> SEQ ID NO: 8 341 <211> LENGTH: 33 342 <212> TYPE: DNA 343 <213> ORGANISM: Artificial Sequence 345 <220> FEATURE: 346 <223> OTHER INFORMATION: Description for Artificial Sequence: primer 348 <400> SEQUENCE: 8 33 349 tttgtcacaa gatttgggct ctgctttctt gtc 352 <210> SEQ ID NO: 9 353 <211> LENGTH: 59 354 <212> TYPE: DNA 355 <213> ORGANISM: Artificial Sequence 357 <220> FEATURE: 358 <223> OTHER INFORMATION: Description of Artificial Sequence: duplexing oligo 361 <220> FEATURE: 362 <221> NAME/KEY: misc feature 363 <222> LOCATION: (11)..(11) 364 <223> OTHER INFORMATION: n is g or t 366 <400> SEQUENCE: 9 W--> 367 tcgagcaggt ncagctggtg cagtcgacaa gaaagcagag cccaaatctt gtgacaaaa 59 370 <210> SEQ ID NO: 10 371 <211> LENGTH: 59 372 <212> TYPE: DNA 373 <213> ORGANISM: Artificial Sequence 375 <220> FEATURE: 376 <223> OTHER INFORMATION: Description of Artificial Sequence: duplexing oligo 379 <220> FEATURE: 380 <221> NAME/KEY: misc feature 381 <222> LOCATION: (53)..(53) 382 <223> OTHER INFORMATION: n is a or c 384 <400> SEQUENCE: 10 W--> 385 ctagttttgt cacaagattt gggctctgct ttcttgtcga ctgcaccagc tgnacctgc 59 388 <210> SEQ ID NO: 11 389 <211> LENGTH: 6 390 <212> TYPE: DNA 391 <213> ORGANISM: Artificial Sequence 393 <220> FEATURE: 394 <223> OTHER INFORMATION: Description of Artificial Sequence: restriction site on vector 396 <400> SEQUENCE: 11 6 397 gagctc 400 <210> SEQ ID NO: 12 401 <211> LENGTH: 6 402 <212> TYPE: DNA 403 <213> ORGANISM: Artificial Sequence 405 <220> FEATURE: 406 <223> OTHER INFORMATION: Description of Artificial Sequence: restriction site on vector 408 <400> SEQUENCE: 12 6 409 tctaga 412 <210> SEQ ID NO: 13

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/006,591A

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 04/15/2005 PATENT APPLICATION: US/10/006,591A TIME: 12:15:45

Input Set : A:\1087-3.txt

Output Set: N:\CRF4\04152005\J006591A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 16
Seq#:5; N Pos. 2
Seq#:6; N Pos. 71
Seq#:7; N Pos. 15
Seq#:9; N Pos. 11
Seq#:10; N Pos. 53

VERIFICATION SUMMARY

DATE: 04/15/2005 PATENT APPLICATION: US/10/006,591A TIME: 12:15:45

Input Set : A:\1087-3.txt

Output Set: N:\CRF4\04152005\J006591A.raw

L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0 L:297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0 L:319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:60 L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0 L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0 L:385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0